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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,405	07/14/2003	Paul V. Cooper	23438.00040	7654

23619 7590 10/09/2007  
SQUIRE SANDERS & DEMPSEY LLP  
TWO RENAISSANCE SQUARE, 40 NORTH CENTRAL AVENUE  
SUITE 2700  
PHOENIX, AZ 85004-4498

EXAMINER
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KASTLER, SCOTT R

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,405	<b>Applicant(s)</b> COOPER, PAUL V.	
	<b>Examiner</b> Scott Kastler	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/20/2007 has been entered.

***Double Patenting***

Applicant is advised that should claim 14 be found allowable, claims 15 and 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The above claims differ only in the intended use of the claimed apparatus (use as a rotor shaft in various devices) and it has been well settled that the manner or method of use of an apparatus cannot be relied upon to fairly further limit claims to the apparatus itself. See MPEP 2114.

Applicant is advised that should claim 18 be found allowable, claim 19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The above claims differ only in the intended use of the claimed apparatus (use as a gas-transfer conduit in various

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devices) and it has been well settled that the manner or method of use of an apparatus cannot be relied upon to fairly further limit claims to the apparatus itself. See MPEP 2114.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6-19 and 22-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grant et al'723 in view of Morando'796. Grant et al teaches that it was known in the art at the time the invention was made to protect graphite components subject to a molten aluminum environment by cementing a protective sleeve of silicon carbide of uniform thickness around the graphite component with the inclusion of a gasket (the shaft coupler) between the protective coating and the graphite component (see the claims for example) where these components may be posts, rotary shafts and molten metal conduits (risers for example) (see col. 3 lines 37-45 for example) which can be employed in scrap metal melters or rotary degassers as instantly claimed (see figure 9 for example) thereby showing all limiting aspects of the above claims except the provision of openings or grooves for the injection of the cement, since the method of making the claimed protected component cannot serve to distinguish claims to the protected component itself unless applicant can present a showing, in proper form, that the process of making the

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protected component provides a substantially different final component from the component shown by Grant et al'723. See MPEP 2113. Morando'796 teaches that at the time the invention was made it was a commonly known expedient in the art to employ openings and grooves in order to inject cement into cavities between components to be cemented together (see col. 4 lines 58-67 for example). In order to prevent displacement between the cemented components. Because Grant et al also does not desire displacement between the cemented components, motivation to employ the grooves and openings disclosed by Morando'796 in order to deliver the cement would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morando'753 in view of Morando'796. Morando'753 teaches a protected graphite component (36) for use in molten metal pumps where the component is covered with a protective sheath (34) and with cement (44) between the sheath and component (36) showing all aspects of the above claims except the use of openings or grooves to deliver the cement since the method of making the claimed protected component cannot serve to distinguish claims to the protected component itself unless applicant can present a showing, in proper form, that the process of making the protected component provides a substantially different final component from the component shown by Morando'753. See MPEP 2113. Morando'796 teaches that at the time the invention was made it was a commonly known expedient in the art to employ openings and grooves in order to inject cement into cavities between components to be cemented together (see col. 4 lines 58-67 for example). In order to prevent displacement between the cemented components. Because Morando'753 also does not desire displacement between the cemented components,

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motivation to employ the grooves and openings disclosed by Morando'796 in order to deliver the cement would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant disclosure in view of either of Grant et al'723 or Morando'753 in view or Morando'796. the admitted prior art of the instant disclosure at paragraphs [0003]-[0015] for example, teaches devices and components of molten metal processing showing all aspects of the above claims except the use of a protected sheath of ceramic cemented around components of graphite subject to attack by the molten metal. As applied to claim 1 above, both of Grant et al'723 and Morando'753 in view or Morando'796 teach that it was known in the art at the time the invention was made to provide a protective sheath of ceramic cemented around components which would be subject to attack by molten metal. Because any of the graphite components disclosed in the devices taught by the admitted prior art of the instant disclosure would also desire the improved resistance to attack by molten metal, motivation to protect any or all of the components of the devices described by the admitted prior art of the instant disclosure in the manner recited by either of Grant et al'723 or Morando'753 in view or Morando'796 would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

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***Response to Arguments***

Applicant's arguments, see the response filed on 8/20/2007, with respect to the rejection(s) of claim(s) 1-39 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the additional reference to Morando'796 showing the use of grooves and openings to inject cement to connect molten metal handling components.

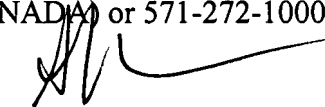
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Scott Kastler  
Primary Examiner  
Art Unit 1742

sk